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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,985

10/12/2005

Martin Schrader

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EXAMINER

PERRY, ANTHONY T

ART UNIT

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2879

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,985	Applicant(s) SCHRADER, MARTIN	
	Examiner ANTHONY T. PERRY	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/18/05, 8/12/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 12-14, 17-19, and 22-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sako et al. (US 2001/0004279).

Regarding claim 1, Sako et al. disclose a display device comprising an array of pixels (P), characterized in that said display device (10,20,30) comprises at least a layer of substantially transparent substrate (103), a pinhole mask (108) carrying an array of pinholes (107) or corresponding limiting apertures and arranged in front of said substrate (103) each pinhole (107) corresponding to a single pixel, an array of electrically controllable refractive or diffractive lenses or corresponding optical components (104a+104b+105) arranged between said substrate (103) and said pinhole mask (108) to affect in an electrically controlled manner the divergence of the light traveling through said substrate (103) and said lenses (104a+104b+105) towards said pinhole mask (108) (for example, see Fig. 1).

Regarding claim 2, Sako et al. disclose the display device according to claim 1, characterized in that the pinholes (117) in the pinhole mask (118) are arranged to be light transmissive in order to compose, a transmissive display device (for example, see Fig. 6).

Regarding claim 3, Sako et al. disclose the display device according to claim 1, characterized in that the pinholes (107) in the pinhole mask (M) are arranged to be at least partly

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light reflective and the pinhole mask (108) is arranged to be at least partly light absorbing in order to compose a reflective display device (for example, see Fig. 1).

Regarding claims 12-14, 17-19, and 22-24, Sako et al. teach the electrically controllable lenses (104a+104b+105) are liquid crystal based switchable lenses, wherein the lenses are variable focus lenses with each having two or more separate electrically selectable focus values, and are controlled through affecting their on-off duty cycle (for example, see paragraphs 0036-0039).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15, 20, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (US 2001/0004279).

Regarding claims 15, 20, and 25, Sako et al. do not specifically recite the display device is a panel display for a wireless mobile station or mobile phone. However, the use of LCD's as a panel display for a mobile phone is well known in the art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably contemplate using the display device as a display panel in a mobile phone.

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Claims 4-5 and 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (US 2001/0004279) in view of Do et al. (US 5,608,554).

Regarding claims 4-5, Sako et al. disclose the display device according to claim 1, but do not specifically teach the use of phosphors, and instead teach the use of color filters, wherein the pinholes (107) in the pinhole mask (108) are arranged to determine an optical path towards color filters to produce a color display (for example, see paragraph 0047). However, Do et al. teach replacing color filters with different types of phosphor materials (8) in order to provide a fluorescent display device (for example, see Fig. 2). Do et al. teach that using phosphor materials instead of color filters provides a display with a greater luminance (for example, see the abstract). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the color filters of the Sako reference with phosphor materials in order to provide a brighter display with a wider viewing angle.

Regarding claims 7-9, Sako et al. teach the electrically controllable lenses (104a+104b+105) are liquid crystal based switchable lenses, wherein the lenses are variable focus lenses with each having two or more separate electrically selectable focus values, and are controlled through affecting their on-off duty cycle (for example, see paragraphs 0036-0039).

Regarding claim 10, Sako et al. and Do et al. do not specifically recite the display device is a panel display for a wireless mobile station or mobile phone. However, the use of LCD's as a panel display for a mobile phone is well known in the art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably contemplate using the display device as a display panel in a mobile phone.

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Claims 11, 16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (US 2001/0004279) in view of Engle (US 5,623,361).

Regarding claim 6, Sako et al. do not specifically teach the electrically controllable lenses are based on the use of electrically deformable viscoelastic gel. However, using a deformable viscoelastic gel, such as a polymer, in a similar way as the liquid crystal based electrically controllable lenses is well known in the art, as evidenced by Engle (for example, see abstract and col. 3, lines 5-34). It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Accordingly, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have reasonably considered using electrically deformable viscoelastic gel or liquid crystal based switchable lenses, since the selection of known materials for a known purpose is within the skill of the art.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sako et al. (US 2001/0004279) in view of Do et al. (US 5,608,554) further in view of Engle (US 5,623,361).

Regarding claim 6, Sako et al. and Do et al. do not specifically teach the electrically controllable lenses are based on the use of electrically deformable viscoelastic gel. However, using a deformable viscoelastic gel, such as a polymer, in a similar way as the liquid crystal based electrically controllable lenses is well known in the art, as evidenced by Engle (for example, see abstract and col. 3, lines 5-34). It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Accordingly, it would have been obvious to one having ordinary skills in the art at the time the invention was made to have reasonably considered using

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electrically deformable viscoelastic gel or liquid crystal based switchable lenses, since the selection of known materials for a known purpose is within the skill of the art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-2457. **The fax phone number for this Group is (571) 273-8300.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Anthony Perry/

Anthony Perry
Patent Examiner
Art Unit 2879
September 29, 2008

/NIMESHKUMAR D. PATEL/
Supervisory Patent Examiner, Art Unit 2879